SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 **BORNUM** 1
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,681.940 (E) 704,063.560 **DATUM** NAD83
DATE START 19-OCT-2015 **DATE FINISH** 19-OCT-2015

HOLE DN-X-1
LINE
STA
OFFSET ft
SURF. ELEV. 81.41
DEPTH TO WATER SEE NOTE

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 1/2	in	**WT OF HAMMER-SAMPLER** 140	lb	**HAMMER FALL-SAMPLER** 30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in (0/6 6/12 12/18 18/24)	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
	0.0				(0.00) . Hand Dug To 4 Ft. To Expose Location Of Utility.
	5.0	J1	2 / 6	4%	(4.00) Grey Brown Silty SAND Gravelly W/ Mica & Organics (M-NPL)
	10.0	R1			(5.00) Run #1 Drilled from 5'0" To 10'0" ROCK REC. 59" 98.3% 10 pcs NW DOUBLE TUBE, SWIVEL
	15.0	R2			(10.00) Run #2 Drilled from 10'0" To 15'0" ROCK REC. 59" 98.3% 11 pcs NW DOUBLE TUBE, SWIVEL

BOTTOM OF HOLE AT 15.00 ft

NOTES:
1) No water table encountered.
2) Automatic hammer used on sampler.
3) Hole progressed by pressed casing to rock.

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 2
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,703.350 (E) 704,090.370 **DATUM** NAD83
DATE START 16-OCT-2015 **DATE FINISH** 16-OCT-2015

HOLE DN-X-2
LINE
STA
OFFSET ft
SURF. ELEV. 80.69
DEPTH TO WATER SEE NOTE

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**		lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 1/2	in	**WT OF HAMMER-SAMPLER**	140	lb	**HAMMER FALL-SAMPLER**	30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK	
	0.0	J1	2	6	8	7	7.1%	(0.00) Brown Gravelly SAND Silty W/ Mica	(M-NPL)
		J2	6	4	5	8	15.6%	(2.00) White Gray Gravelly SAND Silty W/ Mica	(M-NPL)
	5.0	R1						(4.00) Run #1 Drilled from 4'0" To 9'0" ROCK REC. 60" 100% 4 pieces NW DOUBLE TUBE, SWIVEL	
	10.0	R2						(9.00) Run #2 Drilled from 9'0" To 14'0" ROCK REC. 60" 100% 3 pieces NW DOUBLE TUBE, SWIVEL	

BOTTOM OF HOLE AT 14.00 ft

NOTES:
1) No water table encountered.
2) Progressed hole with continuous soil sampling ahead of casing.
3) Automatic hammer used on sampler.

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 **BORNUM** 3
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,727.140 (E) 704,117.490 **DATUM** NAD83
DATE START 19-OCT-2015 **DATE FINISH** 19-OCT-2015

HOLE DN-X-3
LINE
STA
OFFSET ft
SURF. ELEV. 80.12
DEPTH TO WATER SEE NOTE

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 1/2	in	**WT OF HAMMER-SAMPLER** 140	lb	**HAMMER FALL-SAMPLER** 30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in (0/6 6/12 12/18 18/24)	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
	0.0				(0.00) . Hang Dug To 1'-0" To Locate Utility.
		J1	30 / 50	2.6%	(1.00) Gray Sandy GRAVEL Silty W/ Mica (D)
					(2.00) . Top Surface Of Rock.
		R1			(3.00) Run #1 Drilled from 3'0" To 8'0" ROCK REC. 58" 96.7% 9+ pcs and 1 bag NW DOUBLE TUBE, SWIVEL
	5.0				
		R2			(8.00) Run #2 Drilled from 8'0" To 13'0" ROCK REC. 55" 91.7% 8+ pieces NW DOUBLE TUBE, SWIVEL
	10.0				

BOTTOM OF HOLE AT 13.00 ft

NOTES:
1) No water table encountered.
2) Hole progressed by continuous sampling ahead of casing.
3) Automatic hammer used on sampler.

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 **BORNUM** 4
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,702.240 (E) 704,135.020 **DATUM** NAD83
DATE START 15-OCT-2015 **DATE FINISH** 15-OCT-2015

HOLE DN-X-4
LINE
STA
OFFSET ft
SURF. ELEV. 79.27
DEPTH TO WATER SEE NOTE

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**		lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 1/2	in	**WT OF HAMMER-SAMPLER**	140	lb	**HAMMER FALL-SAMPLER**	30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
	0.0							(0.00) 12 Inches Asphalt Pavement
		J1	15	14	13	12	9.8%	(1.00) Brown Gravelly SAND Silty W/ Mica (M-NPL)
		J2	21	19	24	36	12%	(3.00) Light Brown Gravelly SAND Silty W/ Mica (M-NPL)
	5.0	J3	7	20	20	20	9.7%	(5.00) Brown Gravelly SAND Silty W/ Mica (M-NPL)
		J4	16	19	17	17	15%	(7.00) Brown Gravelly SAND Silty W/ Mica (M-NPL)
		J5	8				32.2%	(9.00) Brown Sandy SILT Gravelly W/ Mica (M-NPL)
	10.0							(9.40) Top Surface Of Rock.
		R1						(10.00) Run #1 Drilled from 10'0" To 15'0" ROCK REC. 60" 100% 25+ pcs NW DOUBLE TUBE, SWIVEL
	15.0							
		R2						(15.00) Run #2 Drilled from 15'0" To 20'0" ROCK REC. 60" 100% 18+ pcs (see note) NW DOUBLE TUBE, SWIVEL
	20.0							

BOTTOM OF HOLE AT 20.00 ft

NOTES:
1) Water level depth at completion of drill hole: 9'-2"
2) Progressed hole with continuous soil sampling ahead of casing.
3) Automatic hammer used on sampler.
4) In Core Run #2, noted a 5" thick, weak, weathered seam at 16.2 ft.

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 5
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,680.540 (E) 704,109.530 **DATUM** NAD83
DATE START 15-OCT-2015 **DATE FINISH** 15-OCT-2015

HOLE DN-X-5
LINE
STA
OFFSET ft
SURF. ELEV. 79
DEPTH TO WATER SEE NOTE

CASING	**O. D.**	4 1/2 in	**I. D.**	4 in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**		in
SAMPLER	**O. D.**	2 in	**I. D.**	1 1/2 in	**WT OF HAMMER-SAMPLER**	140 lb	**HAMMER FALL-SAMPLER**	30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in (0/6 6/12 12/18 18/24)	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
	0.0				(0.00) 12 Inches Of Asphalt Pavement
		J1	21 / 18 / 32	9.1%	(1.00) Gray Sandy GRAVEL Silty W/ Mica (W-NPL)
					(2.60) Top Surface Of Rock.
		R1			(3.00) Run #1 Drilled from 3'0" To 8'0" ROCK REC. 34" 56.7% 11+ pcs and 3 bags (see note) NW DOUBLE TUBE, SWIVEL
	5.0				
		R2			(8.00) Run #2 Drilled from 8'0" To 13'0" ROCK REC. 60" 100% 11 pcs NW DOUBLE TUBE, SWIVEL
	10.0				
		R3			(13.00) Run #3 Drilled from 13'0" To 18'0" ROCK REC. 60" 100% 14+ pcs (see note) NW DOUBLE TUBE, SWIVEL
	15.0				

BOTTOM OF HOLE AT 18.00 ft

NOTES:
1) No water table encountered.
2) Hole progressed by spinning casing to rock.
3) Automatic hammer used on sampler.
4) In Core Run #1, noted a 7" thick, weak, weathered seam at 5.1 ft.
5) In Core Run #3, noted 3" thick, weak, weathered seam at 17.5 ft.

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CONTRACT D262599 **CONTRACTOR** Acquifer Drilling &Testin

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 14-DEC-2015 REVISION # 1
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 **BORNUM** 6 **HOLE** DN-X-6
REGION 8 **LINE**
COUNTY WESTCHESTER **STA**
PIN 8101.45 **OFFSET** ft
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION **SURF. ELEV.** 78.75
ACTUAL COORDINATES (N) 787,659.410 (E) 704,084.590 **DATUM** NAD83 **DEPTH TO WATER** SEE NOTE
DATE START 14-OCT-2015 **DATE FINISH** 14-OCT-2015

CASING	**O. D.**	4 1/2	**in**	**I. D.**	4	**in**	**WT OF HAMMER-CASING**		**lb**	**HAMMER FALL-CASING**	**in**
SAMPLER	**O. D.**	2	**in**	**I. D.**	1 1/2	**in**	**WT OF HAMMER-SAMPLER**	140	**lb**	**HAMMER FALL-SAMPLER**	30 **in**

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in (0/6 6/12 12/18 18/24)	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
	0.0				(0.00) . 12 Inches Asphalt Pavement
		J1	18 / 14 / 30	2.9%	(1.00) Gray Sandy SILT Gravelly (D)
					(2.40) . Top Surface Of Rock.
		R1			(3.00) Run #1 Drilled from 3'0" To 8'0" ROCK REC. 60" 100% 8+ pcs NW DOUBLE TUBE, SWIVEL
	5.0				
		R2			(8.00) Run #2 Drilled from 8'0" To 13'0" ROCK REC. 58" 96.7% 9+ pcs NW DOUBLE TUBE, SWIVEL
	10.0				

BOTTOM OF HOLE AT 13.00 ft

NOTES:
1) No water table encountered.
2) Progressed hole with continuous sampling ahead of casing.
3) Automatic hammer used on sampler.

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SHEET 1 OF 1 HOLE DN-X-6

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 **BORNUM** 7
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,718.930 (E) 704,036.560 **DATUM** NAD83
DATE START 21-OCT-2015 **DATE FINISH** 21-OCT-2015

HOLE DN-X-7
LINE
STA
OFFSET ft
SURF. ELEV. 84.37
DEPTH TO WATER SEE NOTE

CASING	O. D.	4 1/2	in	I. D.	4	in	WT OF HAMMER-CASING		lb	HAMMER FALL-CASING	in
SAMPLER	O. D.	2	in	I. D.	1 1/2	in	WT OF HAMMER-SAMPLER	140	lb	HAMMER FALL-SAMPLER	30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
	0.0	J1	2	3	4	10	6.9%	(0.00) Brown Silty SAND Gravelly W/ Mica (M-NPL)
								(2.50) . Encountered A Boulder To 3'-6"
	5.0	J2	26	10	14	20	10.4%	(4.00) Gray Gravelly SAND Silty W/ Mica (M-NPL)
								(6.50) . Top Of Rock
		R1						(7.00) Run #1 Drilled from 7'0" To 12'0" ROCK REC. 60" 100% 12+ pieces NW DOUBLE TUBE, SWIVEL
	10.0							

BOTTOM OF HOLE AT 12.00 ft

NOTES:
1) No water table encountered.
2) Hole progressed by spinning casing to rock.
3) Automatic hammer used on soil sampler.

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 **BORNUM** 8
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,785.850 (E) 704,101.070 **DATUM** NAD83

HOLE DN-X-8
LINE
STA
OFFSET ft
SURF. ELEV. 83.33
DEPTH TO WATER SEE NOTE

DATE START 21-OCT-2015 **DATE FINISH** 21-OCT-2015

CASING	**O. D.**	4 1/2 in	**I. D.**	4 in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2 in	**I. D.**	1 1/2 in	**WT OF HAMMER-SAMPLER**	140 lb	**HAMMER FALL-SAMPLER**	30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK	
	0.0	J1	2	2	4	4	8.5%	(0.00) Brown Sandy SILT Gravelly W/ Mica & Organics	(M-NPL)
	5.0	J2	5	5	7	15	16%	(4.00) Brown Silty SAND Gravelly W/ Mica	(W-NPL)
	10.0	J3	4	7	22	25	14%	(9.00) Black Silty SAND Gravelly W/ Mica	(W-NPL)
								(11.50) Top Of Rock	
	15.0	R1						(12.00) Run #1 Drilled from 12'0" To 17'0" ROCK REC. 60" 100% 10+ pcs NW DOUBLE TUBE, SWIVEL	

BOTTOM OF HOLE AT 17.00 ft

NOTES:
1) *Water level depth after completion of hole: 10'-0"*
2) *Automatic hammer used on soil sampler.*
3) *Hole progressed by drilling ahead of casing with 3.8" rollerbit.*

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 9
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION

HOLE DN-X-9
LINE
STA
OFFSET ft
SURF. ELEV. 82.81

ACTUAL COORDINATES (N) 787,824.820 (E) 704,137.040 **DATUM** NAD83 **DEPTH TO WATER** SEE NOTE

DATE START 22-OCT-2015 **DATE FINISH** 22-OCT-2015

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**		lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 1/2	in	**WT OF HAMMER-SAMPLER**	140	lb	**HAMMER FALL-SAMPLER**	30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
	0.0	J1	2	5	15	18	5.8%	(0.00) Brown Silty SAND Gravelly W/ Mica (M-NPL)
	5.0	J2	6	8	23	15	36.7%	(4.00) Brown Silty SAND Gravelly W/ Small Pieces Of Wood (W-NPL)
								(6.50) Encountered Multiple Boulders To 11.5 Ft.
	10.0	J3	12	13	27	50	13.4%	(11.50) Brown Silty SAND Gravelly W/ Mica (W-NPL)
								(13.40) Top Surface Of Rock.
	15.0	R1						(14.00) Run #1 Drilled from 14'0" To 19'0" ROCK REC. 52" 86.7% 8+ pcs NW DOUBLE TUBE, SWIVEL

BOTTOM OF HOLE AT 19.00 ft

NOTES:
1) Water level depth after completion of hole: 12'-6"
2) Progressed hole by drilling ahead of casing by 3.8" rollerbit.
3) Automatic hammer used on soil sampler.

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 10
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,634.220 (E) 704,143.500 **DATUM** NAD83

HOLE DN-X-10
LINE
STA
OFFSET ft
SURF. ELEV. 78.92
DEPTH TO WATER SEE NOTE

DATE START 20-OCT-2015 **DATE FINISH** 20-OCT-2015

CASING	**O. D.**	4 1/2 in	**I. D.**	4 in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**		in
SAMPLER	**O. D.**	2 in	**I. D.**	1 1/2 in	**WT OF HAMMER-SAMPLER**	140 lb	**HAMMER FALL-SAMPLER**	30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in (0/6 6/12 12/18 18/24)	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
	0.0				(0.00) . Hand Dug To 2'-0" To Verify Depth Of Utility
		J1	4 / 12 / 16 / 10	1.4%	(2.00) Gray Gravelly SAND Silty W/ Mica (M-NPL)
	5.0	J2	7 / 12 / 8 / 8	10.4%	(4.00) Brown Gravelly SAND Silty W/ Mica (M-NPL)
	10.0	J3	4 / 3 / 5 / 10	12.8%	(9.00) Gray Sandy SILT Gravelly W/ Mica (M-NPL)
					(12.50) . Top Surface Of Rock.
		R1			(13.00) Run #1 Drilled from 13'0" To 18'0" ROCK REC. 58" 96.7% 12+ pcs NW DOUBLE TUBE, SWIVEL
	15.0				

BOTTOM OF HOLE AT 18.00 ft

NOTES:
1) *Water level depth after completion of hole: 9'-6"*
2) *Automatic hammer used on soil sampler.*
3) *Drill hole progressed using 3.8" roller bit ahead of casing.*

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 11
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION

HOLE DN-X-11
LINE
STA
OFFSET ft
SURF. ELEV. 81.42
DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 787,587.330 (E) 704,200.560 **DATUM** NAD83
DATE START 26-OCT-2015 **DATE FINISH** 26-OCT-2015

CASING	**O. D.**	4 1/2 in	**I. D.**	4 in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**		in
SAMPLER	**O. D.**	2 in	**I. D.**	1 1/2 in	**WT OF HAMMER-SAMPLER**	140 lb	**HAMMER FALL-SAMPLER**	30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK	
	0.0	J1	1	2	4	4	16.3%	(0.00) Brown Silty SAND Gravelly W/ Mica & Organics	(M-NPL)
	5.0	J2	9	12	10	9	13%	(4.00) Brown Sandy SILT Gravelly W/ Mica	(M-NPL)
	10.0	J3	2	9	25	23	25.3%	(9.00) Gray Gravelly SAND Silty W/ Mica	(W-NPL)
	15.0	J4	8	11	6	2	21.4%	(14.00) Gray Gravelly SAND Silty W/ Mica	(W-NPL)
	20.0	J5	12	13	24	15	15.9%	(19.00) Gray Silty SAND Gravelly W/ Mica	(W-NPL)
	25.0	R1						(23.00) Run #1 Drilled from 23'0" To 28'0" ROCK REC. 60" 100% 7+ pieces NW DOUBLE TUBE, SWIVEL	

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 11
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,587.330 (E) 704,200.560 **DATUM** NAD83
DATE START 26-OCT-2015 **DATE FINISH** 26-OCT-2015

HOLE DN-X-11
LINE
STA
OFFSET ft
SURF. ELEV. 81.42
DEPTH TO WATER SEE NOTE

CASING	O. D.	4 1/2	in	I. D.	4	in	WT OF HAMMER-CASING		lb	HAMMER FALL-CASING		in
SAMPLER	O. D.	2	in	I. D.	1 1/2	in	WT OF HAMMER-SAMPLER	140	lb	HAMMER FALL-SAMPLER	30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
	25.0							

BOTTOM OF HOLE AT 28.00 ft

NOTES:
1) *Water level depth after completion of hole: 10'-6"*
2) *Progressed hole by drilling ahead of casing with 3.8" rollerbit.*
3) *Automatic hammer used on soil sampler.*
4) *Temporarily lost drill wash at 8.5 ft depth.*

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 12
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,658.860 (E) 704,268.390 **DATUM** NAD83
DATE START 23-OCT-2015 **DATE FINISH** 23-OCT-2015

HOLE DN-X-12
LINE
STA
OFFSET ft
SURF. ELEV. 82.81
DEPTH TO WATER SEE NOTE

CASING	O. D.	4 1/2 in	I. D.	4 in	WT OF HAMMER-CASING		lb	HAMMER FALL-CASING		in
SAMPLER	O. D.	2 in	I. D.	1 1/2 in	WT OF HAMMER-SAMPLER	140	lb	HAMMER FALL-SAMPLER	30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK	
	0.0	J1	1	2	2	6	10.5%	(0.00) Brown Silty SAND Gravelly W/ Mica & Organics	(M-NPL)
	5.0	J2	30	35	25		15.4%	(4.00) Brown Gray Gravelly SAND Silty W/ Mica	(W-NPL)
	10.0	J3	9	6	4	4	15.4%	(9.00) Dark Gray Gravelly SAND Silty W/ Mica	(W-NPL)
	15.0	J4	4	6	9	10	16.2%	(14.00) Gray Sandy SILT Gravelly	(W-LPL)
								(16.50) . Assumed Top Surface Of Rock.	
								(17.00) . Unable To Sample Heavily Fractured Rock To 22 Ft. . (Possible Blasted Rock)	
	20.0	R1						(22.00) Run #1 Drilled from 22'0" To 27'0" ROCK REC. 59" 98.3% 10+ pcs. and 1 bag NW DOUBLE TUBE, SWIVEL	
	25.0								

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 12
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,658.860 (E) 704,268.390 **DATUM** NAD83

HOLE DN-X-12
LINE
STA
OFFSET ft
SURF. ELEV. 82.81
DEPTH TO WATER SEE NOTE

DATE START 23-OCT-2015 **DATE FINISH** 23-OCT-2015

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 1/2	in	**WT OF HAMMER-SAMPLER** 140	lb	**HAMMER FALL-SAMPLER** 30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
	25.0							

BOTTOM OF HOLE AT 27.00 ft

NOTES:
1) *Water level depth at completion of hole: 12'-6"*
2) *Automatic hammer used on soil sampler.*
3) *Hole progressed by spinning casing to rock.*

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 13
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,715.260 (E) 704,323.760 **DATUM** NAD83
DATE START 22-OCT-2015 **DATE FINISH** 22-OCT-2015

HOLE DN-X-13
LINE
STA
OFFSET ft
SURF. ELEV. 83.74
DEPTH TO WATER SEE NOTE

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**		lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 1/2	in	**WT OF HAMMER-SAMPLER**	140	lb	**HAMMER FALL-SAMPLER**	30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK	
	0.0	J1	2	3	4	8	5.6%	(0.00) Brown Silty SAND Gravelly W/ Mica & Organics	(M-NPL)
	5.0	J2	35	30	22	35	8.4%	(4.00) Brown Gravelly SAND Silty W/ Mica	(M-NPL)
								(6.00) . Encountered A Boulder To 8.5 Ft.	
	10.0	J3	3	2	11	11	36.2%	(9.00) Brown Gravelly SAND Silty W/ Mica & Organics	(W-NPL)
								(13.30) . Top Surface Of Rock.	
	15.0	R1						(14.00) Run #1 Drilled from 14'0" To 19'0" ROCK REC. 56" 93.3% 11+ pieces NW DOUBLE TUBE, SWIVEL	

BOTTOM OF HOLE AT 19.00 ft

NOTES:
1) *Water level depth at completion of hole: 12'-0"*
2) *Automatic hammer used on soil sampler.*
3) *Progressed drill hole by spinning casing to rock.*

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 **BORNUM** 14
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,585.810 (E) 704,074.930 **DATUM** NAD83
DATE START 20-OCT-2015 **DATE FINISH** 20-OCT-2015

HOLE DN-W-14
LINE
STA
OFFSET ft
SURF. ELEV. 83.15
DEPTH TO WATER SEE NOTE

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 1/2	in	**WT OF HAMMER-SAMPLER** 140	lb	**HAMMER FALL-SAMPLER** 30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK	
	0.0	J1	2	6	5	6	14.1%	(0.00) Brown Silty SAND Gravelly W/ Mica & Organics	(M-NPL)
		J2	4	7	8	7	11.1%	(2.00) Brown Silty SAND Gravelly W/ Mica & Organics	(M-NPL)
	5.0	J3	12	15	30	30	9.5%	(4.00) Brown Silty SAND Gravelly W/ Mica	(M-NPL)
		J4	25	27	38	45	4.2%	(6.00) Brown Silty SAND Gravelly W/ Mica	(M-NPL)
								(8.00) . Encountered A Cobble	
		J5	25	35	35		10.3%	(8.50) Brown Gravelly SAND Silty W/ Mica	(M-NPL)
	10.0	J6	50				16.6%	(10.00) Gray Silty SAND Gravelly W/ Mica	(M-NPL)
								(10.50) . Top Surface Of Rock.	
		R1						(11.00) Run #1 Drilled from 11'0" To 16'0" ROCK REC. 60" 100% 10+ pieces NW DOUBLE TUBE, SWIVEL	
	15.0								

BOTTOM OF HOLE AT 16.00 ft

NOTES:
1) Water level depth at completion of hole: 7'-6"
2) Automatic hammer used on soil sampler.
3) Progressed hole with continuous sampling ahead of casing.

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SHEET 1 OF 1 HOLE DN-W-14

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 15
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION

HOLE DN-W-15
LINE
STA
OFFSET ft
SURF. ELEV. 85
DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 787,623.820 (E) 704,039.990 **DATUM** NAD83
DATE START 14-OCT-2015 **DATE FINISH** 14-OCT-2015

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 1/2	in	**WT OF HAMMER-SAMPLER** 140	lb	**HAMMER FALL-SAMPLER** 30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK	
	0.0	J1	1	6	9	12	11.1%	(0.00) Brown Gravelly SAND Silty W/ Mica	(M-NPL)
		J2	30	35	42	50	6.1%	(2.00) Light Brown Gravelly SAND Silty W/Mica	(M-NPL)
		J3	35				14.4%	(4.00) Brown Gravelly SAND Silty W/ Mica	(M-NPL)
	5.0							(4.50) . Top Surface Of Rock.	
		R1						(5.00) Run #1 Drilled from 5'0" To 10'0" ROCK REC. 55" 91.7% 11+ pieces NW DOUBLE TUBE, SWIVEL	
	10.0								

BOTTOM OF HOLE AT 10.00 ft

NOTES:
1) *No water table encountered.*
2) *Automatic hammer used on soil sampler.*
3) *Progressed hole with continuous sampling ahead of casing.*

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR L. Darrow
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 11-DEC-2015
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 16
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,578.390 (E) 704,105.240 **DATUM** NAD83
DATE START 21-DEC-2015 **DATE FINISH** 21-DEC-2015

HOLE DN-X-16
LINE
STA
OFFSET ft
SURF. ELEV. 80.53
DEPTH TO WATER SEE NOTE

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 3/4	in	**WT OF HAMMER-SAMPLER** 140	lb	**HAMMER FALL-SAMPLER** 30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK	
	0.0	J1	5	8	13	18	12.1%	(0.00) Brown Silty SAND Gravelly W/ Mica & Organics	(M-NPL)
		J2	9	26	20	16	9.6%	(2.00) Brown Gravelly SAND Silty W/ Mica	(M-NPL)
	5.0	J3	15	11	13	13	7.5%	(4.00) Brown Gravelly SAND Silty W/ Mica	(M-NPL)
		J4	9	17	14	10	9.7%	(6.00) Brown Gravelly SAND Silty W/ Mica	(M-NPL)
	10.0	J5	11	9	12	9	14.8%	(8.00) Brown Gravelly SAND Silty W/ Mica	(W-NPL)
		J6	11	14	24	25	16.7%	(10.00) Brown Silty SAND Gravelly W/ Mica	(W-NPL)
		J7	8	9	9	9	16.8%	(12.00) Brown Silty SAND Gravelly W/ Mica	(W-NPL)
	15.0	J8	12	13	12	12	17.2%	(14.00) Brown Silty SAND Gravelly W/ Mica	(W-NPL)
								(16.50) Top Of Rock Surface	
	20.0	R1						(18.00) Run #1 Drilled from 18'0" To 23'0" ROCK REC. 55" 91.7% 9 pieces NW DOUBLE TUBE, SWIVEL	

BOTTOM OF HOLE AT 23.00 ft

NOTES:
1) Water table depth noted during progression of hole: 8'-0"

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR D. Carter
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 15-JAN-2016
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 16
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,578.390 (E) 704,105.240 **DATUM** NAD83
DATE START 21-DEC-2015 **DATE FINISH** 21-DEC-2015

HOLE DN-X-16
LINE
STA
OFFSET ft
SURF. ELEV. 80.53
DEPTH TO WATER SEE NOTE

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**		lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 3/4	in	**WT OF HAMMER-SAMPLER**	140	lb	**HAMMER FALL-SAMPLER**	30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in (0/6, 6/12, 12/18, 18/24)	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
					2) Progressed hole by continuous sampling ahead of casing. *3) Automatic hammer used on soil sampler.*

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR D. Carter
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 15-JAN-2016
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 17
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION

HOLE DN-X-17
LINE
STA
OFFSET ft
SURF. ELEV. 83.31

ACTUAL COORDINATES (N) 787,540.210 (E) 704,019.920 **DATUM** NAD83 **DEPTH TO WATER** SEE NOTE

DATE START 28-DEC-2015 **DATE FINISH** 28-DEC-2015

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**		lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 3/4	in	**WT OF HAMMER-SAMPLER**	140	lb	**HAMMER FALL-SAMPLER**	30 in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK	
	0.0	J1	4	3	3	4	20.1%	(0.00) Brown Silty SAND Gravelly W/ Mica & Organics	(M-NPL)
		J2	4	4	8	12	20.1%	(2.00) Brown Silty SAND Gravelly W/ Mica	(M-NPL)
	5.0	J3	9	19	17	22	13.1%	(4.00) Brown Silty SAND Gravelly W/ Mica	(M-NPL)
		J4	20	28	49		10.1%	(6.00) Brown Silty SAND Gravelly W/ Mica	(M-NPL)
		J5	50			50	18.6%	(7.50) . Top Surface Of Rock.	
		R1						(8.00) Run #1 Drilled from 8'0" To 13'0" ROCK REC. 59" 98.3% 8 pieces NW DOUBLE TUBE, SWIVEL	
	10.0								

BOTTOM OF HOLE AT 13.00 ft

NOTES:
1) *No water table encountered.*
2) *Progressed hole with continuous sampling ahead of casing.*
3) *Automatic hammer used on soil sampler.*

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR D. Carter
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 15-JAN-2016
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 18
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION

HOLE DN-X-18
LINE
STA
OFFSET ft
SURF. ELEV. 81.96

ACTUAL COORDINATES (N) 787,471.040 (E) 703,956.820 **DATUM** NAD83 **DEPTH TO WATER** SEE NOTE

DATE START 24-DEC-2015 **DATE FINISH** 24-DEC-2015

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 3/4	in	**WT OF HAMMER-SAMPLER** 140	lb	**HAMMER FALL-SAMPLER** 30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in (0/6 6/12 12/18 18/24)	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
	0.0	J1	1 / 1 / 2 / 2	12.8%	(0.00) Brown Silty SAND Gravelly W/ Organics (M-NPL)
		J2	1 / 4 / 9 / 12	10%	(2.00) Brown Silty SAND Gravelly W/ Mica (M-NPL)
	5.0	J3	15 / 50	4.8%	(4.00) Brown Silty SAND Gravelly W/ Mica (D)
		R1			(5.00) Run #1 Drilled from 5'0" To 10'0" ROCK REC. 60" 100% 8+ pieces NW DOUBLE TUBE, SWIVEL
	10.0				BOTTOM OF HOLE AT 10.00 ft

NOTES:
1) *No water table encountered.*
2) *Progressed hole with continuous sampling ahead of casing.*
3) *Automatic hammer used on soil sampler.*

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR D. Carter
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 15-JAN-2016
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 19
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,429.230 (E) 703,971.220 **DATUM** NAD83
DATE START 22-DEC-2015 **DATE FINISH** 22-DEC-2015

HOLE DN-X-19
LINE
STA
OFFSET ft
SURF. ELEV. 82.1
DEPTH TO WATER SEE NOTE

CASING	**O. D.**	4 1/2	in	**I. D.**	4	in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**	in
SAMPLER	**O. D.**	2	in	**I. D.**	1 3/4	in	**WT OF HAMMER-SAMPLER** 140	lb	**HAMMER FALL-SAMPLER** 30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK
	0.0	J1	1	3	2	3	15%	(0.00) Brown Silty SAND Gravelly W/ Mica & Organics (M-NPL)
		J2	3	6	9	16	12.5%	(2.00) Brown Gravelly SAND Silty W/ Mica (M-NPL)
	5.0	J3	11	5	56		11.9%	(4.00) Brown Gravelly SAND Silty W/ Mica (M-NPL)
								(5.50) . Encountered 9" Of Concrete Over 9" Of Gravelly Sand.
								(7.00) . Drilled Concrete To 8.4 Ft.
	10.0							(8.40) . Top Surface Of Rock.
		R1						(10.00) Run #1 Drilled from 10'0" To 13'0" ROCK REC. 34" 94.4% 9+ pieces NW DOUBLE TUBE, SWIVEL
	15.0	R2						(13.00) Run #2 Drilled from 13'0" To 15'0" ROCK REC. 15" 62.5% 2 pieces NW DOUBLE TUBE, SWIVEL

BOTTOM OF HOLE AT 15.00 ft

NOTES:
1) Water level depth 2 days after completion of hole: 12'-7"
2) Progressed hole with continuous sampling ahead of casing.
3) Automatic hammer used on soil sampler.

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CONTRACT _____ **CONTRACTOR** _____

DRILL RIG OPERATOR
SOIL & ROCK DESCRIPTION
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 15-JAN-2016
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

PSN 12242 BORNUM 20
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION

HOLE DN-X-20
LINE
STA
OFFSET ft
SURF. ELEV. 88.57
DEPTH TO WATER SEE NOTE

ACTUAL COORDINATES (N) 787,512.020 (E) 703,944.270 **DATUM** NAD83
DATE START 29-DEC-2015 **DATE FINISH** 31-DEC-2015

CASING	**O. D.**	4 1/2 in	**I. D.**	4 in	**WT OF HAMMER-CASING**	lb	**HAMMER FALL-CASING**		in
SAMPLER	**O. D.**	2 in	**I. D.**	1 3/4 in	**WT OF HAMMER-SAMPLER**	140 lb	**HAMMER FALL-SAMPLER**	30	in

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK	
	0.0	J1	1	3	8	8	13.2%	(0.00) Brown Silty SAND Gravelly W/ Mica & Organics	(M-NPL)
		J2	5	5	5	5	26.7%	(2.00) Brown Silty SAND Gravelly W/ Mica & Organics	(M-NPL)
	5.0	J3	30	10	11	41	15.7%	(4.00) Brown Silty SAND Gravelly W/ Mica & Organics	(M-NPL)
		J4	47	77	50		6.2%	(6.00) Brown Gravelly SAND W/ Mica	(M-NPL)
		J5	50				12.8%	(7.50) . Top Surface Of Rock.	
	10.0	R1						(8.00) Run #1 Drilled from 8'0" To 13'0" ROCK REC. 58" 96.7% 18+ pieces NW DOUBLE TUBE, SWIVEL	

BOTTOM OF HOLE AT 13.00 ft

NOTES:
1) *No water table encountered.*
2) *Progressed hole with continuous sampling ahead of casing.*
3) *Automatic hammer used on soil sampler.*

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR D. Carter
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER Paul Salchert
DATE APPROVED 15-JAN-2016
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

SM 282 E 12/02

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG

UNOFFICIAL LOG

PSN 12242 BORNUM 21
REGION 8
COUNTY WESTCHESTER
PIN 8101.45
PROJECT HUTCHINSON RIVER PARKWAY SERVICE AREA EXPANSION
ACTUAL COORDINATES (N) 787,507.560 (E) 704,047.050 **DATUM** NAD83

HOLE DN-X-21
LINE
STA
OFFSET ft
SURF. ELEV. 81.95
DEPTH TO WATER SEE NOTE

DATE START 23-DEC-2015 **DATE FINISH** 23-DEC-2015

CASING	**O. D.**	4 1/2	**in**	**I. D.**	4	**in**	**WT OF HAMMER-CASING**		**lb**	**HAMMER FALL-CASING**	**in**
SAMPLER	**O. D.**	2	**in**	**I. D.**	1 3/4	**in**	**WT OF HAMMER-SAMPLER**	140	**lb**	**HAMMER FALL-SAMPLER**	30 **in**

CASING BLOWS/ft	DEPTH ft BELOW SURFACE	SAMPLE NO.	BLOWS ON SAMPLER in 0/6	6/12	12/18	18/24	MOIST. CONT. (%)	DESCRIPTION OF SOIL AND ROCK	
	0.0	J1	7	12	4	3	14.7%	(0.00) Brown Silty SAND Gravelly W/ Mica & Organics	(M-NPL)
		J2	3	2	7	12	6.6%	(2.00) Brown Gravelly SAND Silty W/ Mica	(D)
	5.0	J3	13	12	20	21	2.8%	(4.00) Light Brown Gravelly SAND Silty W/ Mica	(D)
		J4	33	80	44	25	2.9%	(6.00) Light Brown Gravelly SAND Silty W/ Mica	(D)
	10.0	J5	222	6	26	44	10.9%	(8.00) Brown Gravelly SAND Silty W/ Mica	(M-NPL)
		J6	32	35	36	50	7.9%	(10.00) Brown Gravelly SAND Silty W/ Mica	(M-NPL)
								(11.75) Top Surface Of Rock.	
	15.0	R1						(12.66) Run #1 Drilled from 12'8" To 16'1" ROCK REC. 41" 99.9% 12+ pieces NW DOUBLE TUBE, SWIVEL	
		R2						(16.08) Run #2 Drilled from 16'1" To 17'9" ROCK REC. 20" 99.8% 4 pieces NW DOUBLE TUBE, SWIVEL	
								BOTTOM OF HOLE AT 17.75 ft	

NOTES:
1) *Water level depth 8 days after completion of hole: 11'-3"*
2) *Progressed hole with continuous sampling ahead of casing.*
3) *Automatic hammer used on soil sampler.*

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CONTRACT D262599 **CONTRACTOR** Aquifer Drilling &Testing

DRILL RIG OPERATOR D. Carter
SOIL & ROCK DESCRIPTION T. Twerdak
REG GEOTECHNICAL ENGINEER UNOFFICIAL LOG
DATE APPROVED
RESIDENT ENGINEER
STRUCTURE NAME **B.I.N.**

STRUCTURE 3N
HUTCHINSON RIVER PARKWAY (SECTION #4)

SM 282e (2/76)

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
SOIL MECHANICS BUREAU
SUBSURFACE EXPLORATION LOG

REGION 8
COUNTY Westchester
PIN 8101.23
PROJECT Hutchinson River Parkway (Section #4)
SOIL SERIES
COORD. LOC. N361, 807 E665,355
DATE START 6/3/85 DATE FINISH 6/6/85

HOLE DNB-840
LINE NB
STA 329+05
OFFSET 110 'Lt.
SURF. ELEV. 71.5
DEPTH TO WATER *6'

CASING O.D. 4½" I.D. 3 7/8" WEIGHT OF HAMMER - CASING 300 LBS. HAMMER FALL - CASING 18"
SAMPLER O.D. 2" I.D. 1½" WEIGHT OF HAMMER - SAMPLER 300 LBS. HAMMER FALL - SAMPLER 18"

DEPTH BELOW SURFACE	BLOWS ON CASING	SAMPLE NO.	BLOWS ON SAMPLER 0/.5	5/1.0	1.0/1.5	1.5/2.0	DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. %
0								
	5	1	2	2			Moist Brown Sandy Silt w/Roots & Fibers (Non Plastic)	23
	10	2	3	4			Moist Brown	23
	12				4		–	
	21							
	38							
	79	3	13	8			Moist Brown Gravelly Sand Silty (Non Plastic)	11
	77				5		–	
	63							
	65							
10'	63							
	62	4	12	8			Moist Brown	19
	92				10		–	
	70							
	61							
	74							
	103	5	17	14			Moist Brown	10
	170				15		–	
	222							
	531							
20'	678							
	314	6	17	42			Moist Brown	13
	348							
	437	REFUSAL						
							Schist — Run #1 23'-28' Recovered 38" Multiple pieces	
							Schist — Run #2 28'-33' Recovered 54" 12 Pieces	
30'								
							Bottom of Boring is 33' *Encountered Water at 6'	
							NOTE: Drilled rock from 23'0" to 33'0" with Christensen Core Barrel.	
40'								

ROCK
DRILLED

THE SUBSURFACE INFORMATION SHOWN HEREON WAS OBTAINED FOR STATE DESIGN AND ESTIMATE PURPOSES. IT IS MADE AVAILABLE TO AUTHORIZED USERS ONLY THAT THEY MAY HAVE ACCESS TO THE SAME INFORMATION AVAILABLE TO THE STATE. IT IS PRESENTED IN GOOD FAITH, BUT IS NOT INTENDED AS A SUBSTITUTE FOR INVESTIGATIONS, INTERPRETATION OR JUDGMENT OF SUCH AUTHORIZED USERS.

CONTRACTOR _____ SM _____

DRILL RIG OPERATOR W. Marvin
SOIL & ROCK DESCRIP. S. Whitney
REGIONAL SOILS ENGR. Herbert W. Litts
SHEET 1 OF 1
STRUCTURE NAME/NO. STRUCTURE 3N

HOLE DNB-840

STRUCTURE 3N
HUTCHINSON RIVER PARKWAY (SECTION #4)

SM 282e (2/76)

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
SOIL MECHANICS BUREAU

SUBSURFACE EXPLORATION LOG

REGION 8
COUNTY Westchester
PIN 8101.23
PROJECT Hutchinson River Parkway (Section #4)
SOIL SERIES
COORD. LOC. N361,670 E665,195
DATE START 6/26/85 DATE FINISH 7/2/85

HOLE DNB-841
LINE NB
STA 327+10
OFFSET 142'Lt.
SURF. ELEV. 71.2
DEPTH TO WATER *5'

CASING O.D. 4½" I.D. 3-7/8" WEIGHT OF HAMMER - CASING 300 LBS. HAMMER FALL - CASING 18"
SAMPLER O.D. 2" I.D. 1½" WEIGHT OF HAMMER - SAMPLER 300 LBS. HAMMER FALL - SAMPLER 18"

DEPTH BELOW SURFACE	BLOWS ON CASING	SAMPLE NO.	BLOWS ON SAMPLER 0/.5	5/1.0	1.0/1.5	1.5/2.0	DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. %
0	1	1	1	1			Moist Brown Sandy Silt w/Fibers (Non Plastic)	46
	2	2	1	1			Wet Brown Sandy Silt (Non Plastic)	32
	5				1			
	2							
	54							
	68	3	10	8			Moist Brown Gravelly Sand Silty (Non Plastic)	10
	126				9			
	133							
	249							
10'	595							
	552	4	22	30			Moist Brown	6
	222	on 6"			60		Run #1 11'6"-16'6" Rec. 42" Multiple pieces	
							Schist	
							Run #2 16'6"-21'6" Rec. 48" Multiple pieces	
20'							DRILLED ROCK	
							Bottom of Boring is 21'6" *Encountered Water at 5'	
							NOTE: Drilled rock from 11'6" to 21'6" w/Christensen core barrel	

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CONTRACTOR _____ SM _____

DRILL RIG OPERATOR W. Marvin
SOIL & ROCK DESCRIP. S. Whitney
REGIONAL SOILS ENGR. Herbert W. Litts
SHEET 1 OF 1
STRUCTURE NAME/NO. STRUCTURE 3N

HOLE DNB-841

SM 282e (2/76)

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
SOIL MECHANICS BUREAU

SUBSURFACE EXPLORATION LOG

REGION 8
COUNTY Westchester
PIN 8101.23
PROJECT Hutchinson River Parkway (Section #4)
SOIL SERIES
COORD. LOC. N362,180 E665,594
DATE START 7/22/85 DATE FINISH 7/22/85

HOLE DAC-851
LINE SB
STA 333+50
OFFSET 0'
SURF. ELEV. 98.0
DEPTH TO WATER *No Water Enc

CASING O.D. 2 7/8" I.D. 2¼" WEIGHT OF HAMMER - CASING 300 LBS. HAMMER FALL - CASING 18"
SAMPLER O.D. 2" I.D. 1½" WEIGHT OF HAMMER - SAMPLER 300 LBS. HAMMER FALL - SAMPLER 18"

DEPTH BELOW SURFACE	BLOWS ON CASING	SAMPLE NO.	BLOWS ON SAMPLER 0/.5	5/1.0	1.0/1.5	1.5/2.0	DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. %
0	2	1	1	3			Moist Brown Sandy Silt Gravelly w/Fibers (Non Plastic)	25
	17	2	1		3		Moist Brown	12
	34			3	4			
	39							
	DRILLED ROCK						Schist — Run #1 4'-6' Rec. 2" 1 piece - Seamy; Run #2 6'-9' Rec. 26" 10 pieces	
10'							Bottom of Boring is 9' *No Water Encountered	

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CONTRACTOR _____ SM _____

DRILL RIG OPERATOR R. Decker
SOIL & ROCK DESCRIP. S. Whitney
REGIONAL SOILS ENGR. Herbert W. Litts
SHEET 1 OF 1
STRUCTURE NAME/NO.

HOLE DAC-851

SM 282e (2/76)

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
SOIL MECHANICS BUREAU

SUBSURFACE EXPLORATION LOG

REGION 8
COUNTY Westchester
PIN 8101.23
PROJECT Hutchinson River Parkway (Section #4)
SOIL SERIES
COORD. LOC. N362,395 E665,768
DATE START 7/16/85 DATE FINISH 7/17/85

HOLE DAC-852
LINE SB
STA 336+25
OFFSET 0'
SURF. ELEV. 97.8
DEPTH TO WATER *No Water Enc.

CASING O.D. 2 7/8" I.D. 2¼" WEIGHT OF HAMMER - CASING 300 LBS. HAMMER FALL - CASING 18"
SAMPLER O.D. 2" I.D. 1½" WEIGHT OF HAMMER - SAMPLER 300 LBS. HAMMER FALL - SAMPLER 18"

DEPTH BELOW SURFACE	BLOWS ON CASING	SAMPLE NO.	BLOWS ON SAMPLER 0/.5	.5/1.0	1.0/1.5	1.5/2.0	DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. %
0	4	1	1	1			Moist Brown Sandy Silt w/Fibers (Non Plastic)	21
	7	2	2		1		Moist Brown Sandy Silt Gravelly w/Fibers (Non Plastic)	10
	44			3	10			
	**							
	↑ DRILLED ROCK						Schist — Run #1 4'-7'6" Rec. 14" Multiple pieces	
							Run #2 7'6"-10'6" Rec. 18" Multiple pieces	
10'	↓						Bottom of Boring is 10'6" *No Water Encountered	
							NOTE: **Open Hole from 3'0" to 4'0"	

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CONTRACTOR _____ SM _____

DRILL RIG OPERATOR R. Decker
SOIL & ROCK DESCRIP. S. Whitney
REGIONAL SOILS ENGR. Herbert W. Litts
SHEET 1 OF 1
STRUCTURE NAME/NO.

HOLE DAC-852

STRUCTURE 3N
HUTCHINSON RIVER PARKWAY - SECTION #4

SM 282e (2/76)

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
SOIL MECHANICS BUREAU

SUBSURFACE EXPLORATION LOG

REGION 8
COUNTY Westchester
PIN 8101.23
PROJECT Hutchinson River Parkway - Section #4
SOIL SERIES
COORD. LOC. N361,677 E665,267
DATE START 2/7/89 DATE FINISH 2/8/89

HOLE DAB-1006
LINE NB ℄
STA 327+50
OFFSET 100'Lt.
SURF. ELEV. 73.9
DEPTH TO WATER *8'0"

CASING O.D. 2 7/8" I.D. 2¼" WEIGHT OF HAMMER - CASING 300 LBS. HAMMER FALL - CASING 18"
SAMPLER O.D. 2" I.D. 1½" WEIGHT OF HAMMER - SAMPLER 300 LBS. HAMMER FALL - SAMPLER 18"

DEPTH BELOW SURFACE	BLOWS ON CASING	SAMPLE NO.	BLOWS ON SAMPLER 0/.5	.5/1.0	1.0/1.5	1.5/2.0	DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. %
0	6	1	1	2			Moist Brown Silty Fine SAND Gravelly w/Organic (N-PL)	39
	17				4			
	28							
	5							
	8							
	21	2	3	8			Moist Brown Gravelly SAND Silty (N-PL)	15
	46				6			
	85							
	90							
10'	46							
	52	3	14	16			Moist Brown	13
	57				18			
	65							
	77							
	175							
	BOUNCE REFUSAL ON CASING AT 15'0"							
	ROCK						Run #1 Drilled from 15'0" to 20'0" Rec. 32" - 32 Pieces	
20'	DRILLED						BLACK & WHITE SEAMY KNEISS (HARD & SOFT)	
							Run #2 Drilled from 20'0" to 25'0" Rec. 42" - 26 Pieces	
25'0"							Bottom of Boring is 25'0" *Encountered Water at 8'0"	
							NOTE: After taking samples (dry hole), removed large boulders 0-2'0".	
							NOTE: Good water return.	

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CONTRACTOR _____ SM _____

DRILL RIG OPERATOR James V. Daley
SOIL & ROCK DESCRIP. G. Branham
REGIONAL SOILS ENGR. Herbert W. Litts
SHEET 1 OF 1
STRUCTURE NAME/NO. HUTCHINSON RIVER PARKWAY SECTION #4/STRUCTURE #3N

HOLE DAB-1006

STRUCTURE #3N
HUTCHINSON RIVER PARKWAY

SM 282e (2/76)

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
SOIL MECHANICS BUREAU
SUBSURFACE EXPLORATION LOG

REGION 8
COUNTY Westchester
PIN 8101.23
PROJECT Hutchinson River Parkway - Section #4
SOIL SERIES
COORD. LOC. N361,793 E665,277
DATE START 3/2/89 DATE FINISH 3/3/89

HOLE DAB-1007
LINE NB ℄
STA 328+50
OFFSET 160'Lt.
SURF. ELEV. 70.8
DEPTH TO WATER *3' below ground level

CASING O.D. 2 7/8" I.D. 2¼" WEIGHT OF HAMMER - CASING 300 LBS. HAMMER FALL - CASING 18"
SAMPLER O.D. 2" I.D. 1½" WEIGHT OF HAMMER - SAMPLER 300 LBS. HAMMER FALL - SAMPLER 18"

DEPTH BELOW SURFACE	BLOWS ON CASING	SAMPLE NO.	BLOWS ON SAMPLER 0/.5	.5/1.0	1.0/1.5	1.5/2.0	DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. %
0	2	1	1	1			Moist Brown Fine Sandy SILT w/Org. (N-PL)	60
	6	2	1	1			Moist Brown Fine Sandy SILT w/Org. & Mica (N-PL)	36
	16				2			
	21							
	32							
	51	3	9	10			Moist Brown Gravelly SAND Silty w/Mica (N-PL)	14
	45				10			
	73							
	72							
	92							
10'	150	4	18	16			Moist Brown Silty SAND Gravelly (N-PL)	18
	150				50			
	BOUNCE REFUSAL ON CASING & SPOON 11'2"							
							Run #1 Drilled from 11'2" to 13'2" Rec. 18" - 13 Pieces	
							Run #2 Drilled from 13'2" to 18'2" Rec. 60" - 37 Pieces	
							BEDROCK Black & White Gneiss	
							Run #3 Drilled from 18'2" to 21'2" Rec. 36" - 34 Pieces	
20' DRILLED ROCK								
21'2"							Bottom of Boring is 21'2" *Encountered Water @ 3'0" below ground level.	

THE SUBSURFACE INFORMATION SHOWN HEREON WAS OBTAINED FOR STATE DESIGN AND ESTIMATE PURPOSES. IT IS MADE AVAILABLE TO AUTHORIZED USERS ONLY THAT THEY MAY HAVE ACCESS TO THE SAME INFORMATION AVAILABLE TO THE STATE. IT IS PRESENTED IN GOOD FAITH, BUT IS NOT INTENDED AS A SUBSTITUTE FOR INVESTIGATIONS, INTERPRETATION OR JUDGMENT OF SUCH AUTHORIZED USERS.

CONTRACTOR _____ SM _____

DRILL RIG OPERATOR James V. Daley
SOIL & ROCK DESCRIP. G. Branham
REGIONAL SOILS ENGR. Herbert W. Litts
SHEET 1 OF 1
STRUCTURE NAME/NO. HUTCHINSON RIVER PARKWAY SECTION #4/STRUCTURE 3N

HOLE DAB-1007